

IN THE CLAIMS

**The claims are not amended. They are presented here for the Examiner's convenience.**

Claims 1-9 (Canceled).

Claim 10 (Previously Presented): A process for regenerating a spent hydrogenation catalyst comprising at least one catalytic metal selected from the group consisting of Ru, Rh, Pd, Os, Ir and Pt on an inert support, wherein the spent catalyst has been used in a hydrogenation reaction of acetylene present in a gas mixture consisting essentially of HCl obtained from the pyrolysis of 1,2-dichloroethane, wherein the process consists essentially of a thermal treatment of said spent hydrogenation catalyst in the presence of oxygen at a temperature of between 300 and 700 °C.

Claim 11 (Previously Presented): The process according to Claim 10, wherein the catalytic metal is Pd.

Claim 12 (Previously Presented): The process according to Claim 10, wherein the inert support is based primarily on silica.

Claim 13 (Previously Presented): The process according to Claim 10, wherein the inert support has a BET surface area of less than 5 m<sup>2</sup>/g.

Claim 14 (Previously Presented): The process according to Claim 10, wherein the temperature during the thermal treatment is between 400 and 600°C.

Claim 15 (Previously Presented): The process according to Claim 10, wherein the thermal treatment takes place in the presence of air.

Claim 16 (Previously Presented): The process according to Claim 10, wherein the thermal treatment consists in a residence in a stove or a ventilated electric oven.

Claim 17 (Previously Presented): The process according to Claim 10, wherein the catalyst is contaminated with traces of heavy metals.

Claim 18 (Previously Presented): A process for synthesizing vinyl chloride monomer by coupling a direct chlorination and an oxychlorination of ethylene to form 1,2-dichloroethane, which is converted primarily into vinyl chloride monomer and into HCl by pyrolysis, the HCl containing traces of acetylene and being recycled to the oxychlorination following hydrogenation of these traces of acetylene in the presence of a catalyst regenerated by the process according to Claim 10.

Claim 19 (Previously Presented): The process according to Claim 10, wherein the concentration of the catalytic metal in the catalyst is greater than or equal to 0.01% and less than or equal to 10% by weight relative to the total weight of the catalyst.

Claim 20 (Previously Presented): The process according to Claim 10, wherein the support has a specific surface area measured in accordance with the BET method with nitrogen of less than  $5 \text{ m}^2/\text{g}$ , an average pore volume of less than  $0.01 \text{ ml/g}$ , and a particle

size between 1 and 20 mm, said catalytic metal being present thereon in a layer of less than or equal to a micron in the form of crystallites having a size of between 0.1 and 0.5  $\mu\text{m}$ .

Claim 21 (Previously Presented): The process according to Claim 20, wherein the support has a specific surface area of less than 1  $\text{m}^2/\text{g}$  and a particle size between 3 and 7 mm.

Claim 22 (Previously Presented): The process according to Claim 10, wherein the catalyst is beads of silica that are 3 to 5 mm in diameter with 0.15% of Pd supported at the surface thereof and having a specific surface area of less than 1  $\text{m}^2/\text{g}$ .

Claim 23 (Previously Presented): A process for synthesizing vinyl chloride monomer by coupling a direct chlorination and an oxychlorination of ethylene to form 1,2-dichloroethane, which is converted primarily into vinyl chloride monomer and into HCl by pyrolysis, the HCl containing traces of acetylene and being recycled to the oxychlorination following hydrogenation of these traces of acetylene in the presence of a catalyst regenerated by the process according to Claim 22.